

SEQUENCE LISTING

1. SEQUENCE INFORMATION

1.1 SEQUENCE INFORMATION, NUCLEOTIDE SEQUENCE INFORMATION, AND
1.2 SEQUENCE INFORMATION

1.3 SEQUENCE INFORMATION

1.4 SEQUENCE INFORMATION

1.5 SEQUENCE INFORMATION

1.6 SEQUENCE INFORMATION

1.7 SEQUENCE INFORMATION

1.8 SEQUENCE INFORMATION

1.9 SEQUENCE INFORMATION

1.10 SEQUENCE INFORMATION

1.11 SEQUENCE INFORMATION

1.12 SEQUENCE INFORMATION

1.13	1.14	1.15	1.16	1.17	1.18	60
1.19	1.20	1.21	1.22	1.23	1.24	120
1.25	1.26	1.27	1.28	1.29	1.30	180
1.31	1.32	1.33	1.34	1.35	1.36	240
1.37	1.38	1.39	1.40	1.41	1.42	300
1.43	1.44	1.45	1.46	1.47	1.48	360
1.49	1.50	1.51	1.52	1.53	1.54	420
1.55	1.56	1.57	1.58	1.59	1.60	480
1.61	1.62	1.63	1.64	1.65	1.66	540
1.67	1.68	1.69	1.70	1.71	1.72	600
1.73	1.74	1.75	1.76	1.77	1.78	660
1.79	1.80	1.81	1.82	1.83	1.84	720
1.85	1.86	1.87	1.88	1.89	1.90	780
1.91	1.92	1.93	1.94	1.95	1.96	840
1.97	1.98	1.99	2.00	2.01	2.02	900
2.03	2.04	2.05	2.06	2.07	2.08	960
2.09	2.10	2.11	2.12	2.13	2.14	1020
2.15	2.16	2.17	2.18	2.19	2.20	1080
2.21	2.22	2.23	2.24	2.25	2.26	1140
2.27	2.28	2.29	2.30	2.31	2.32	1200
2.33	2.34	2.35	2.36	2.37	2.38	1260
2.39	2.40	2.41	2.42	2.43	2.44	1320
2.45	2.46	2.47	2.48	2.49	2.50	1380
2.51	2.52	2.53	2.54	2.55	2.56	1440
2.57	2.58	2.59	2.60	2.61	2.62	1500
2.63	2.64	2.65	2.66	2.67	2.68	1560
2.69	2.70	2.71	2.72	2.73	2.74	1620
2.75	2.76	2.77	2.78	2.79	2.80	1680
2.81	2.82	2.83	2.84	2.85	2.86	1740
2.87	2.88	2.89	2.90	2.91	2.92	1800
2.93	2.94	2.95	2.96	2.97	2.98	1860
2.99	3.00	3.01	3.02	3.03	3.04	1920
3.05	3.06	3.07	3.08	3.09	3.10	1980
3.11	3.12	3.13	3.14	3.15	3.16	2040
3.17	3.18	3.19	3.20	3.21	3.22	2100

EXPRESS MAIL NO.

79640226710

161 His Gly Gly Ile Lys Gly Ser Arg Ser Phe Glu Glu Ser Gly Ile
 170
 175
 180 Val Val Tyr Tyr Arg Phe Ser Leu Arg His Phe His Leu Asp Thr
 185
 190
 195 Thr Gly Tyr Val Arg Arg Ile Lys Ile Thr Lys Gly Arg Phe Trp Thr
 200
 205
 210 Val Val Val Lys Ile Ile Ile Ala Arg Ile Leu Gly Asn Val Thr
 215
 220
 225 Arg Gly Val Ile Gly Leu Lys Arg Ser Val Ser Arg Glu Arg Tyr
 230
 235
 240 Val Glu Thr Leu Val Val Ala Asp Lys Met Met Val Ala Tyr His Gly
 245
 250
 255
 260 Arg Arg Asp Val Glu Gln Tyr Val Leu Ala Ile Met Asn Ile Val Ala
 265
 270
 275 Lys Leu Phe Glu Asp Ser Ser Leu Gly Ser Thr Val Asn Ile Leu Val
 280
 285
 290 Ile Arg Leu Ile Leu Leu Thr Glu Asp Gln Pro Thr Leu Glu Ile Thr
 295
 300
 305 His His Ala Gly Lys Ser Leu Asp Ser Phe Cys Lys Trp Glu Lys Ser
 310
 315
 320
 325 Ile Val Asn His Ser Gly His Gly Asn Ala Ile Pro Glu Asn Gly Val
 330
 335
 340 Arg Asn His Asp Thr Ala Val Leu Ile Thr Arg Tyr Asp Ile Cys Ile
 345
 350
 355 Thr Lys Asn Lys Pro Cys Gly Thr Leu Gly Leu Ala Pro Val Gly Gly
 360
 365
 370 Met Cys Glu Arg Glu Arg Ser Cys Ser Val Asn Glu Asp Ile Gly Leu
 375
 380
 385 Arg Thr Ala Phe Thr Ile Ala His Glu Ile Gly His Thr Phe Gly Met
 390
 395
 400
 405
 410
 415
 420
 425
 430
 435
 440
 445
 450
 455
 460
 465
 470
 475
 480
 485
 490
 495
 500

100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115
100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115

116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131
116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131

132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147
132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147

148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163

164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179
164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179

180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195
180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195

196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211
196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211

212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227
212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227

228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243
228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243

244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259
244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259

260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275
260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275

276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291
276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291

292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307
292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307

308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323
308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323

324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339
324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339

340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355
340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355

356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371
356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371

372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387
372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387

388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403
388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403

404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419
404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419

Ala Ile Leu Ala Arg Asp Ser Leu Ile Ile Tyr Ser Trp His Tyr Ala
 81 818 831
 Ser Trp Ser Lys Cys Ser Ala Ala Cys Ala Gly Gly Ser Gln Val Gln
 833 841 841
 Leu Val Ser Tyr Asn Asn Ile Leu Arg Ser Ser Ala Val Ala Pro His
 843 851
 Ser Trp Ser Ala Ile Ser Lys Leu Ile Lys Arg His Arg Ala Tyr Asn
 853 865 865
 Ser Ala Ile Tyr Ile Ile Asp Trp Val Val Gly Asn Trp Ser Leu Cys
 866 890 895
 Ser Arg Ser Cys Asp Ala Gly Val Arg Ser Arg Ser Val Val Cys Gln
 900 905 910
 Arg Arg Val Ser Ala Ala Glu Glu Lys Ala Leu Asp Asp Ser Ala Cys
 915 920 925
 Leu Ile Pro Arg Ile Pro Val Leu Glu Ala Cys His Gly Pro Thr Cys
 926 935 940
 Ile Ile Ala Trp Ala Ala Leu Asp Trp Ser Glu Cys Thr Pro Ser Cys
 941 950 955 960
 Lys Ile Gly Leu Arg His Arg Val Val Leu Cys Lys Ser Ala Asp His
 965 970 975
 Arg Ala Thr Leu Ile Pro Ala His Cys Ser Pro Ala Ala Lys Pro Pro
 980 985 990
 Ala Thr Met Arg Cys Asn Leu Arg Arg Cys Pro Pro Ala Arg Trp Val
 995 1000 1005
 Ala Gly Glu Trp Gly Glu Cys Ser Ala Gln Cys Gly Val Gly Gln Arg
 1010 1015 1020
 Val Arg Ser Val Arg Cys Thr Ser His Thr Gly Gln Ala Ser His Glu
 1021 1030 1035 1040
 Tyr Thr Ile Ala Leu Arg Pro Pro Thr Thr Thr Gln Gln Cys Glu Ala
 1041 1050 1055
 Ser Ile Ser Ile Ser Ile Ser Ile Ser Ile Ser Ile Ser Ile Ser Ile
 1056 1065 1070
 Ser Thr Ser Thr Ser Thr Ser Thr Ser Thr Ser Thr Ser Thr Ser Thr
 1071 1080 1085
 Ser Arg Ala Lys Ile Arg His Met Cys Cys Lys Thr Cys Gln Gly His
 1086 1100 1105

1. *Chlorophyll a* (Chl *a*) and *Chlorophyll b* (Chl *b*) were determined by the method of Arar and Collins (1971) using a Shimadzu 10A-UV spectrophotometer. The concentration of Chl *a* and Chl *b* was expressed as $\mu\text{g mL}^{-1}$ of the sample.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Asp	Ala	Leu	Ile	Leu	Leu	Thr	Ala	Asp	Gln	Pro	Thr	Leu	Gln	Ile	Thr
381						384					387				
His	His	Ala	Gly	Tyr	Pro	Ile	Asp	Ser	Phe	Cys	Lys	Trp	Gln	Lys	Ser
					391					395					397
Val	Val	Pro	His	Pro	Gly	His	Gly	Asn	Ala	Ile	Pro	Glu	Asn	Gly	Val
					399				403					407	
Val	Asn	His	Asp	Pro	Ala	Val	Ile	Ile	His	Arg	Tyr	Arg	Ile	Tyr	Ile
			409					414					417		
Thr	Lys	Asn	Lys	Ile	Lys	Gly	Thr	Leu	Gly	Leu	Ala	Pro	Val	Gly	Gly
		419					420					425			
Met	Tyr	Gln	Ala	Glu	Arg	Ser	Cys	Ser	Ile	Asn	Glu	Asp	Ile	Gly	Leu
	429					435					438				
Ala	Thr	Ala	Pro	Thr	Ile	Ala	His	Glu	Ile	Gly	His	Thr	Phe	Gly	Met
					439						439				400
Asn	His	Asp	Gly	Val	Gly	Asn	Gly	Cys	Gly	Ala	Arg	Gly	Gln	Asp	Pro
			445						446					445	
Ala	Lys	Leu	Met	Ala	Ala	His	Ile	Thr	Met	Lys	Thr	Asn	Pro	Phe	Val
			450						425				430		
Trp	Pro	Pro	Cys	Pro	Arg	Asp	Tyr	Ile	Thr	Ser	Phe	Leu	Asp	Ser	Gly
			438				440						445		
Leu	Gly	Leu	Cys	Leu	Asn	Asn	Arg	Pro	Pro	Arg	Gln	Asp	Phe	Val	Tyr
						455						460			
Leu	His	Thr	Ala	Pro	Gly	Gln	Ala	Tyr	Asp	Ala	Asp	Glu	Gln	Cys	Arg
					470					475					480
His	Gln	His	Gly	Val	Lys	Ser	Arg	Gln	Cys	Lys	Tyr	Gly	Glu	Val	Cys
			485						490					495	
Pro	Ala	Leu	Trp	Cys	Leu	Ser	Lys	Ser	Asn	Arg	Cys	Ile	Thr	Asn	Ser
			500					505					510		
Leu	Pro	Ala	Ala	Ala	Gly	Thr	Leu	Cys	Gln	Thr	His	Thr	Ile	Asp	Lys
			515				520					525			
Val	Val	Val	Val	Asn	Val	Val	Tyr	Val	His	His	Gly	Pro	Asn	His	Ala
					530							534			
Val	Val	Val	Val	Val	Val	Val	Val	Val	Val	Val	Val	Val	Val	Val	Val
					535							539			
Val	Pro	Tyr	Gly	Gly	Gly	Val	Pro	Pro	Pro	Pro	Arg	His	Tyr	Asp	Pro
									540					544	
Val	Asn	His	Leu	Leu	Gly	Gly	Lys	Tyr	Tyr	Leu	Gly	His	Asn	Asn	Asn

Asp Glu Met Ala Tyr Ser Ala Phe Asn Ser Val Phe Phe Arg Gly Lys
 615 620 625
 His Tyr Ile Thr Lys Thr Tyr Arg Gly Gly Gly Val Lys Ala Cys Ser
 630 635 640
 Asp Thr Tyr Leu Ala Ala Gly Phe Asn Phe Tyr Thr Glu Arg Ala Ala
 645 650
 Asp Thr Asp Gly Thr Ile Tyr Arg Ile Asn Thr Val Asp Ile Tyr
 655 660
 Asp Thr Asp Gly Tyr Tyr Lys His Val Gly Tyr Asn Arg Val Leu Gly Ser
 665 670
 Asp Ser Arg Glu Asp Lys Cys Arg Val Cys Gly Gly Asp Gly Ser Ala
 675 680
 Tyr Glu Thr Ile Glu Gly Val Phe Ser Pro Ala Leu Pro Gly Thr Gly
 685 690
 Tyr Glu Asp Val Val Trp Ile Pro Lys Gly Ser Val His Ile Phe Ile
 695 700
 His Asp Leu Asn Leu Ser Leu Ser His Leu Ala Leu Lys Gly Asp Gln
 705 710
 His Thr Leu Leu Leu Glu Gly Leu Pro Gly Thr Pro Gln Pro His Arg
 715 720
 Leu Thr Leu Ala Gly Thr Thr Phe His Leu Arg Gln Gly Pro Asp Gln
 725 730
 Ala Glu Ser Leu Glu Ala Leu Gly Pro Ile Asn Ala Ser Leu Ile Ile
 735 740
 Met Val Leu Ala Gln Ala Glu Leu Pro Ala Leu His Tyr Arg Phe Asn
 745 750
 Ala Pro Ile Ala Arg Asp Ala Leu Pro Pro Tyr Ser Trp His Tyr Ala
 755 760
 Ile Trp Thr Lys Cys Ser Ala Gln Cys Ala Gly Gly Ser Gln Val Gln
 765 770
 His Thr Thr Tyr Asn Asn His Leu Asn Ser Ser Ala Val Ala Phe His
 775 780
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 785 790
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 795 800
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 805 810
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 815 820
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 825 830
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 835 840
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 845 850
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 855 860
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 865 870
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 875 880
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 885 890
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 895 900
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 905 910
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 915 920
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 925 930
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 935 940
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 945 950
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 955 960
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 965 970
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 975 980
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 985 990
 Asp Thr Thr Tyr Thr Thr Thr Tyr Thr Thr Thr Thr Thr Thr Thr Thr
 995 1000

101 His Arg Ser Ile Val Ala Asp Gln Gln Gln Tyr Leu Ile His His
 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120

121 His Arg Gly Gly Ile Lys Gly Ser Arg Ser Pro Gln Gln Ser Gly His
 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140

141 Val Val Val Tyr Lys Arg Ser Ser Leu Arg His Pro His Leu Asp Thr
 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160

161 Tyr Tyr Val Val Arg Arg Val Lys Ile Thr Lys Gly Arg Tr Thr Thr
 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180

181 Arg Arg Thr Thr Lys Ile Pro Pro Ala Arg Pro Leu Gly Asn Gln Thr
 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200

201 Arg Gly His His Gly Leu Lys Arg Ser Val Ser Arg Glu Arg Tyr
 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220

221 His Thr Thr Leu Val Val Ala Asp Lys Met Met Val Ala Tyr His Gly
 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240

241 Arg Arg Asp Val Gln Gln Tyr Val Leu Ala Ile Met Asn Ile Val Ala
 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260

261 Lys Leu Phe Gln Asp Ser Ser Leu Gly Ser Thr Val Asn Ile Leu Val
 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280

281 Thr Arg Leu Ile Leu Leu Thr Glu Asp Gln Pro Thr Leu Glu Ile Thr
 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300

301 His His Ala Gly Lys Ser Leu Asp Ser Phe Cys Lys Trp Gln Lys Ser
 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320

321 Thr Thr Asn His Ser Gly His Gly Asn Ala Ile Pro Gln Asn Gly Val
 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340

341 Ala Asn His Asp Thr Ala Val Leu Ile Thr Arg Tyr Asp Ile Cys Ile
 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360

361 Tyr Lys Asn Lys Pro Cys Gly Thr Leu Gly Leu Ala Pro Val Gly Gly
 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380

381 Met Lys Glu Arg Glu Arg Ser Cys Ser Val Asn Glu Asp Ile Gly Leu
 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400

401 Thr Arg Thr Thr Thr Thr Ala His His Ile Gly His Thr His Gly Met
 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420

421 Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr
 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440

441 Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr
 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460

461 Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr
 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480

481 Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr
 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500

[illegible]

117
 118
 119
 120
 121
 122
 123
 124
 125
 126
 127
 128
 129
 130
 131
 132
 133
 134
 135
 136
 137
 138
 139
 140
 141
 142
 143
 144
 145
 146
 147
 148
 149
 150
 151
 152
 153
 154
 155
 156
 157
 158
 159
 160
 161
 162
 163
 164
 165
 166
 167
 168
 169
 170
 171
 172
 173
 174
 175
 176
 177
 178
 179
 180
 181
 182
 183
 184
 185
 186
 187
 188
 189
 190
 191
 192
 193
 194
 195
 196
 197
 198
 199
 200
 201
 202
 203
 204
 205
 206
 207
 208
 209
 210
 211
 212
 213
 214
 215
 216
 217
 218
 219
 220
 221
 222
 223
 224
 225
 226
 227
 228
 229
 230
 231
 232
 233
 234
 235
 236
 237
 238
 239
 240
 241
 242
 243
 244
 245
 246
 247
 248
 249
 250
 251
 252
 253
 254
 255
 256
 257
 258
 259
 260
 261
 262
 263
 264
 265
 266
 267
 268
 269
 270
 271
 272
 273
 274
 275
 276
 277
 278
 279
 280
 281
 282
 283
 284
 285
 286
 287
 288
 289
 290
 291
 292
 293
 294
 295
 296
 297
 298
 299
 300
 301
 302
 303
 304
 305
 306
 307
 308
 309
 310
 311
 312
 313
 314
 315
 316
 317
 318
 319
 320
 321
 322
 323
 324
 325
 326
 327
 328
 329
 330
 331
 332
 333
 334
 335
 336
 337
 338
 339
 340
 341
 342
 343
 344
 345
 346
 347
 348
 349
 350
 351
 352
 353
 354
 355
 356
 357
 358
 359
 360
 361
 362
 363
 364
 365
 366
 367
 368
 369
 370
 371
 372
 373
 374
 375
 376
 377
 378
 379
 380
 381
 382
 383
 384
 385
 386
 387
 388
 389
 390
 391
 392
 393
 394
 395
 396
 397
 398
 399
 400
 401
 402
 403
 404
 405
 406
 407
 408
 409
 410
 411
 412
 413
 414
 415
 416
 417
 418
 419
 420
 421
 422
 423
 424
 425
 426
 427
 428
 429
 430
 431
 432
 433
 434
 435
 436
 437
 438
 439
 440
 441
 442
 443
 444
 445
 446
 447
 448
 449
 450
 451
 452
 453
 454
 455
 456
 457
 458
 459
 460
 461
 462
 463
 464
 465
 466
 467
 468
 469
 470
 471
 472
 473
 474
 475
 476
 477
 478
 479
 480
 481
 482
 483
 484
 485
 486
 487
 488
 489
 490
 491
 492
 493
 494
 495
 496
 497
 498
 499
 500

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100